Emissions Inventory System Update

LDEQ
Office of Environmental Assessment
Air Quality Assessment Division

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Presentation Overview

- Overview of EI Project
- Data Elements Terminology
- Data Structure and Flow
- Data Elements Hierarchy
- Emissions Types
- GCXVII, IA and Fugitives
- Primary Identifiers and Relationship to NEDS
- Data Element Examples
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EI Project Overview

- Design Enhanced EI System
- Combine EIS and TEDI
- Integrate with TEMPO
- Web Interface Data Submittal and Access
- Incorporate All Federal Data Elements
- Enhance Data Quality
- Migrate Legacy Data
- Report to NEI

Data Elements Terminology

- Facility - Location at which business is conducted.

- Source - Equipment or unit that generates. emissions. This is the operating equipment, not the control equipment or the stack/vent.

- Process - Description of the operational mode and material throughput of a source generating emissions.

Data Elements Terminology, continued

- Control System - Equipment through which emissions are routed for control or abatement

- Release Point - Physical location of release of pollutants to atmosphere

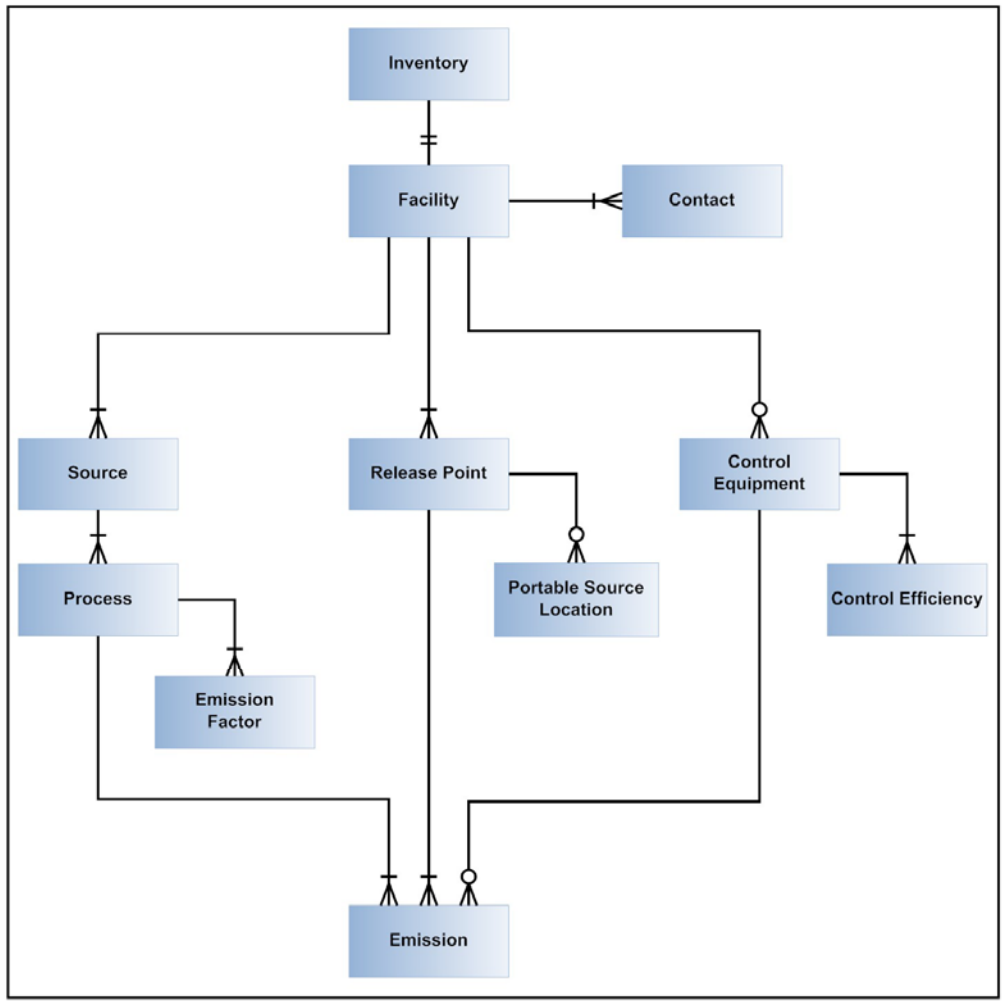
Data Elements Terminology, continued

- Emissions Path – Combination of a source, a process, and a release point; may also include a control system.

- Emissions Type – Four types: Routine Emissions; Startup/Shutdown Emissions; Variance Emissions; Emergency Releases/Upsets/Malfunction Emissions

- Emissions Record - An emissions record includes the emissions path, emissions type, pollutant, and tons emitted.

Data Structure and Flow



Data Elements - Hierarchy

Inventory Information - Exactly one record, identifies the reporting period.

Facility Information - Exactly one record, includes identifying information for the facility.

Contact Information - At least three records

- EI Facility Contact
- Responsible Official, and
- EI Billing Party
- EI Consultant may be included

Hierarchy…*cont'd*

Source Information - One or more records (one for each source at the facility).

Process Information - One or more records per source - one for each mode that the source operated in during the year.

Emission Factor - One record per process per pollutant emitted by that process.

Hierarchy… *cont'd*

Control System Information - Zero or more records. Not tied to a specific source – control system is associated with a source on the emissions record, and may be included in one or more emissions paths.

Control Efficiency - One or more records for each Control Equipment record. Control efficiency is specified for each pollutant controlled by the equipment.

Hierarchy… *cont'd*

Release Point Information - One or more records. A release point is not tied to a specific source - it is associated with a source on the emissions record.

Portable Source Location - Zero or more records for each release point record. Only used to indicate alternate locations at which a portable source operated.

Hierarchy… *cont'd*

Emissions Records - One record of

- Tons emitted
- For each pollutant,
- For each emissions type, and
- For each emissions path
  - source, process, control equipment, and release point

Data Elements

- ALL data elements MUST be reported, if applicable
- There are no “optional” data elements
- Certain data elements only apply in certain cases, e.g.
  - Firing rate for combustion equipment
  - Ozone day information for required Parishes

Emissions Reporting

- ALL emissions MUST be reported
- Permitted or unpermitted
- Routine, Startup/Shutdown, Emergency
- Variance
- GCXVII, IA
- Fugitives as area source

Emissions Types
Routine Emissions

- Emissions generated from ongoing, normal operations.
- Typically will be or should be authorized by a permit.
- Does not include Emergency/upset/malfunction events
- Does not include emissions authorized under a variance
- Does not include startup and shutdown if
  - differ by pollutant or emission rate from routine
  - are permitted as a separate activity

Emissions Types
Startup/Shutdown Emissions

- Emissions generated during startup or shutdown of a source
- Use established SU/SD procedures to define, if available
- Report as a separate emission type if
  - Differ from routine emissions (pollutant or rate)
  - Permitted as separate activity
- May aggregate and report as one source if permitted as a separate EPN

Emissions Types
Variance Emissions

- Emissions that occur under a variance
- LAC 33:III.917
- Report as a separate emissions type for the emissions path

Emissions Types Emergency/Upset/Malfunction

- Emissions from sudden, unavoidable, reasonably unforeseeable circumstances
- Beyond the control of the owner/operator
- Acts of God
- Require immediate corrective action
- Not scheduled events
- Report as a separate emissions type for the emissions path

GCXVII
Insignificant Activities
Fugitives

- May aggregate GCXVII
  - By Permit (not facility-wide)
- May aggregate IA
  - By Permit (not facility-wide)
- May aggregate Fugitives
  - By Permit (not facility-wide)

Data Elements
Primary Identifiers

- For Source, Control System, and Release Point Records
- Facility-generated IDs
- Up to 6 characters
- Must be unique across the entire inventory for each ID type
- Must remain the same for an item over time (source, process, control equipment, release point)

Relationship to NEDS Points

- For each NEDS Point there will be
  - One Source ID and
  - One Release Point ID
  - May be a Control System ID
- Crosswalk SI Number for the NEDS Point will be mapped to the Source ID where possible
- The 2006 “Starter File” will include these SI Numbers

Data Entry Highlights

- Data Entry Options
  - Online data entry – enter data directly into web-based application
  - Data upload – acceptance of a variety of formatted data submittals including Microsoft Excel, delimited ASCII text, and XML
  - Online QA checks performed prior to certification, will help reduce adjustments and updates

Data Entry Highlights… *cont'd*

- Web-based data entry features
  - Pull-down menus
  - Conversion of UTMs to longitude/latitude
- Flat-file data entry will require repetitive entry of certain data elements
- Data Validation and Error Notification
- Certification Statements
  - online or paper submittals
- First year may require some reorganization of inventory

Example 1 - Spray Booth

- Spray Booth = Source Information
- Filter = Control System Information
- Roof vent = Release Point Information
- Process(es) = Coating Material(s)

Source ID:	SPB003
Release Point ID:	SPBVT3
Control System ID:	SPBFL3
Process records:	CT001, CT002

Example 1, Spray Booth, con't.

Emissions Path:

SPB003 → CT001 → SPBFL3 → SPBVT3

Emissions Records:

SPB003 → CT001 → SPBFL3 → SPBVT3: Routine, VOC, 100.00 tons

SPB003 → CT001 → SPBVT3: Variance, VOC, 4.00 tons

SPB003 → CT002 → SPBFL3 → SPBVT3: Routine, VOC, 10.00 tons

Example 2 - Reactor

- A Reactor makes 2 products, using different combinations of raw materials with different set of emissions factors
- Product 1 Campaign
  - Routes through Scrubber during normal operations
  - Routes to Flare during Startup
- Product 2 Campaign
  - Routes to Flare
- Reactor vents through PRV during overpressure emergencies

Example 2 - Reactor, con't

Emissions Records:

RCT001 → PRD001 → SCR001 → SCVT01: Routine, VOC, 10.01 tons

RCT001 → PRD001 → FLR001 → FLVT01: Startup, VOC, 2.00 tons

RCT001 → PRD002 → FLR001 → FLVT01: Upset, NOx, 1.00 tons

RCT001 → PRD001 → PRV029: Upset, VOC, 0.34 tons

Training Schedule & Locations

- April 2, 2007 Baton Rouge

  LDEQ Oliver Pollock Room

  WEBCAST

- April 12, 2007 Lake Charles

  McNeese Student Union

- April 16, 2007 Alexandria

  Holiday Inn Convention Center

- April 23, 2007 Baton Rouge

  LDEQ Oliver Pollock Room

  WEBCAST

Questions?